

[What Is Claimed Is]

1. A data monitoring system in a communication network comprising:

the global position system (GPS) receiver to provide a time information received from the

GPS;

5 a first packet data collecting device to collect, together with the time information provided
by the GPS receiver, a communication protocol and a communication environment information
between a base station supporting a mobile communication service of a mobile station and a
packet data serving node (PDSN) supporting a data communication service of the mobile station;
and provide the collected information to the MPMS and

10 a mobile station-packet data serving node monitoring system (MPMS) to receive at least
one of a wireless communication environment, a data communication environment, and a mobile
communication protocol of the mobile station from the mobile station along with the GPS time
information, and receive at least one of a packet data communication environment and a data
communication protocol of the mobile station from the first packet data collecting device along
15 with the time information, and monitor and analyze the received information on a single time axis.

2. The system of claim 1, further comprising a second packet data collecting device to

collect at least one of a communication protocol and a communication environment information between the PDSN and an application server along with the time information provided from the GPS receiver, and provide the received information to the MPMS, wherein

the MPMS receives at least one of the wireless communication environment, the data communication environment, and the mobile communication protocol of the mobile station from the mobile station along with the time information of the GPS receiver, receives at least one of the packet data communication environment and the data communication protocol of the mobile station from the second packet data collecting device along with the time information, and monitors and analyzes the received information on a single time axis.

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3. The system of claim 1 or claim 2, further comprising a computing device to receive the communication environment information and the communication protocol via the MPMS and store, monitor, and analyze the received information, the communication protocol and the communication environment information being received from at least one of the mobile station, the first and second packet data collecting devices.

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4. A data monitoring method in a communication network comprising:

a first data communication network monitoring step of collecting at least one of a communication protocol and a communication environment information between a base station supporting a mobile communication service of a mobile station and a packet data serving node (PDSN) supporting a data communication service of the mobile station along with the global
5 position system (GPS) time information;

a mobile communication network monitoring step of collecting at least one of a wireless communication environment, a data communication environment, and a mobile communication protocol of the mobile station along with the GPS time information; and

a step of monitoring and analyzing the data collected in the first data communication
10 monitoring step and the mobile communication network monitoring step on a single time axis.

5. The method of claim 4, further comprising:

a second data communication network monitoring step of collecting at least one of a data communication protocol and a packet data communication environment information between the
15 PDSN and an application server along with the GPS time information; and

a step of monitoring and analyzing the data collected in the second data communication network monitoring step and the mobile communication network monitoring step on a single time

axis.

6. The method of claim 4 or claim5, further comprising a step of providing a computing device with the data collected in the mobile communication network monitoring step, the first and
- 5 the second data communication monitoring steps, and storing, monitoring and analyzing the data.